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ABSTRACT

The purpose of this study was to develop a psychometrically sound instrument to measure teachers' attitudes toward students with special needs, the Scale of Teacher's Attitudes Toward Inclusion (STATIC). Approximately 1,440 inservice teachers were asked to complete the STATIC. There were 516 respondents from 5 school districts in Alabama. Various statistical analyses were performed with data including preliminary analyses for item homogeneity, item and scale analyses, Item Response Theory studies, and factor analyses. Reliability and validity studies suggested that it is possible to measure teacher attitudes toward inclusion as defined by the STATIC. Factor analyses identified four subscales called "Advantages and Disadvantages," "Professional Issues," "Philosophical Issues," and "Logistical Concerns." Implications from this large-scale analysis suggest the use of the STATIC to: (1) examine differences in teachers' attitudes toward students with special needs; (2) identify the relationship between teachers' attitudes toward inclusion and their attitudes toward disabled persons in general; (3) examine the effects of teacher's attitudes on performance of special education students; (4) guide placement decisions for special education students; (5) screen prospective teachers prior to employment; (6) shape teacher education programs; and (7) focus remediation diagnostically on specific dimensions of attitude requiring modification. (Contains 7 tables, 3 figures, and 48 references.) (Author/SLD)

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ED 415 259

THE DEVELOPMENT AND PSYCHOMETRIC ANALYSIS OF THE SCALE OF TEACHERS' ATTITUDES TOWARD INCLUSION (STATIC)

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Abstract

The purpose of this study was to develop a psychometrically sound instrument to measure teachers' attitudes toward students with special needs. The Scale of Teachers' Attitudes Toward Inclusion (STATIC) was developed to examine teachers' attitudes toward students with special needs. Approximately 1440 inservice teachers were contacted for participation in the study. All subjects were asked to complete the STATIC. There were 516 teachers who responded from five school districts in Alabama. Various statistical analyses were performed with the data including preliminary analyses for item homogeneity, item and scale analyses, IRT studies, and factor analyses. Reliability and validity studies suggested that it is possible to measure teachers' attitudes toward inclusion as defined by the STATIC. Factor analyses identified four subscales called *Advantages and Disadvantages*, *Professional Issues*, *Philosophical Issues*, and *Logistical Concerns*. Implications from this large scale analysis is the use of the STATIC to: (a) examine differences in teachers' attitudes toward students with special needs, (b) identify the relationship between teachers' attitudes toward inclusion and their attitudes toward disabled persons in general, (c) examine the effects of teachers' attitudes on performance of special education students; (d) guide placement decisions for special education students; (e) screen prospective teachers prior to employment; (f) shape teacher education programs; and (g) diagnostically focus remediation on specific dimensions of attitude requiring modification.

Introduction

According to the United States Department of Education (1993) there are nearly five million students with disabilities who are eligible for special education services. Among these, 34 percent are served in regular education classrooms, 35 percent through pull-out programs or resource rooms, 25 percent in separate special education classes, and six percent in separate schools, residential facilities, hospitals or at home. Some educators have expressed that all special education students should be educated in regular education classrooms, a trend that, most recently, has been called inclusion (Sailor, 1991; Stainback & Stainback, 1984). These educators propose that students with special needs should no longer be visitors in regular education classrooms; and all special education services should be delivered in regular education classrooms instead of the more restrictive special education classrooms. Such placement of all students receiving special education services would bear a tremendous impact on everyone associated with the field of education. Administrators, teachers, students, and parents would all be forced to make major adjustments if these students are placed in regular education classrooms (Conte, 1994). In reality, inclusion means that all teachers become teachers of special education students. Many teachers are hesitant and unwilling to make the necessary accommodations that are required for these students; they are reluctant to accept these students as well as the practice of inclusion (Geskie & Salasek, 1988; Jones & Guskin, 1984). Historically, negative attitudes have often been reflected toward disabled persons in general (Wyatt v. Stickney, 1979). Attitudes, which are largely negative (Altman, 1981; Gottlieb, Corman, & Curci, 1984; Harth, 1977), place limitations on students with special needs and inhibit the possibility of their success (Antonak, 1994).

If all students who receive special education services are going to be educated in regular education classrooms, then teachers' attitudes are critical to their success (Barnett & Kabzems, 1992; Berryman, 1988; Darovill, 1989; Garvar Pinhas & Schmelkin, 1989; Hudson & Clunies Ross, 1984; Larrivee & Cooke, 1979). It is imperative that an accurate and psychometrically sound means of assessing teachers' attitudes be available (Antonak & Livneh, 1988) to guide the placement of children receiving special education services. Successful integration and acceptance of these students hinge on long-term changes of negative attitudes held by education professionals (Antonak & Larrivee, 1995).

Because of fanatical and sometimes militant philosophical and theoretical positions held by advocates and critics of inclusion, special education in today's society has been described by some as being in a state of flux. Hallahan and Kauffman (1994) stated that the disputes between radical integrationists and conservatives "have threatened to rip apart the field of special education" (p. 46). On one hand are radical proponents of inclusion that would like to eradicate the continuum of services, which has been a possibility for less than a generation, a continuum that provides for each child to have an education implemented in the least restrictive environment with related services. Gartner and Lipsky (1991) wrote that the "continuum of placements, and . . . cascade of services were progressive when developed but do not promote <u>full</u> inclusion" (p. 52, emphasis in original). On the other hand, some educators and parents are satisfied with the present delivery system and continuum of services and would like to work to improve it to better meet the needs of children (Hallahan & Kauffman, 1994; Mims, 1994a; Russell, 1994; Spann & Patterson, 1994; Tate-Brown, Wortham, & Olenchak, 1994).

If the movement toward inclusion continues, and teachers' attitudes are a significant variable related to the success of students with disabilities, additional research is warranted. Potential areas for research are: (a) examining differences in teachers' attitudes toward students with special needs, (b) identifying relationships between teachers' attitudes to students with special needs and teachers' attitudes toward disabled persons in general, (c) predicting the success of students with special needs from teachers' attitudes, (d) desensitizing regular education teachers with negative attitudes toward students with special needs, (e) promoting positive attitudes toward these students through inservice training, and (f) screening prospective teachers' for the presence of positive attitudes toward students with special needs.

The purpose of this study was to develop a psychometrically sound instrument to examine the extent that teachers' attitudes toward students with special needs could be measured. This instrument was called the Scale of Teachers' Attitudes Toward Inclusion (STATIC) (Cochran, 1996). The STATIC was used to examine several differences in teachers' attitudes toward students with special needs. A secondary purpose was to identify the degree of relationship between teachers' attitudes toward the inclusion of students with special needs in regular education classrooms and teachers' attitudes toward disabled persons in general. Of particular interest here is teachers' attitudes toward disabled persons in general and the predictability of their attitude toward inclusion. The Scale of Attitudes Toward Disabled Persons (SADP) (Antonak, 1985a, 1985b) was used in conjunction with the STATIC to accomplish this purpose. The goal of the researcher was to contribute to the extant body of literature and future studies that may ultimately lead to interventions to bring about more positive attitude of teachers toward students with special needs.

Several research questions emerged from the problem associated with attitudes toward the inclusion of children with special needs in regular education classrooms. In general: To what extent can teachers' attitudes toward students with special needs included in regular education classrooms be measured? This question is addressed specifically by examining the psychometric properties of the Scale of Teachers' Attitudes Toward Inclusion (STATIC) as represent by the three following questions:

1. Do items on the STATIC adequately measure the theoretical construct of "attitude toward inclusion" of special education children in regular education classrooms?
2. What are the underlying dimensions of the attitude scale on the STATIC?
3. What are the difficulty levels of the items on the STATIC?

Procedures and Data Collection

Teachers selected to participate in this study were from 32 schools in five school districts in north and central Alabama. Among the 32 schools, 18 were elementary schools, six were middle schools, five were high schools, and two schools were for children with special needs. Ten (31%) schools were classified as being located in urban areas, six (20%) in suburban areas, 11 (33%) in communities, and five (16%) in rural areas.

Supervisors of research in the local school districts were contacted personally and by mail to describe the study and ask for their approval to conduct the study. One thousand four hundred forty teachers were asked to participate in the study. All teachers in each of the 32 schools received in their school mail box a description of the study, informed consent form for participation in research, a computer scanable sheet, and the STATIC. Demographic composition of the sample was determined by the natural proportion of regular and special educators, elementary and secondary educators, educational level, gender, and racial origin found in the schools.

The response rate was calculated at 36% or 516 respondents. Teachers were categorized as follows: 261 (51%) elementary school teachers, 233 (45%) secondary teachers; 186 (36%) were special education teachers, and 308 (60%) regular education teachers. Twenty-two (4%) did not indicate their teaching assignment. Sixty-three (12%) teachers were male, 321 (62%) were female, and 132 (26%) did not report gender. Racial composition may be summarized as 433 (84%) white, 48 (9%) black, and 35 (7%) from other ethnic origins. Mean experience for the teachers was six to 10 years with 54% reporting experience in excess of 10 years. Educational attainments reported by teachers were that 184 (36%) held bachelor degrees, 266 (52%) master degrees, 32 (6%) specialist degrees, 10 (2%) doctoral degrees, and 21 (4%) did not report their educational level. Average class size was 21 to 30 students with 190 (37%) of the teachers reporting more than five students with special needs in their classes. Types of special needs represented in their classes were described as 346 (67%) students with learning differences, 61 (12%) with behavioral differences, 25 (5%) with health or physical differences, and 84 (16%) with no special needs or not reporting. Also, teachers were asked if they had a child with special needs living in their home; 51 (10%) reported that they did.

Results

Reliability studies on the STATIC consistently indicate a Cronbach alpha reliability coefficient of .89 held constant for the total group as well as for individual groups of regular and special education teachers, and elementary and secondary teachers. Item-to-total correlations (see Table 1) range from .26 to .70 with a mean of .51, standard deviation of .11, and a standard error of measurement of ±0.04.

Table 1

STATIC - Item-to-Total Correlations

Item	*r*	Item	*r*
1	.64	11	.34
2	.57	12	.61
3	.51	13	.61
4	.47	14	.61
5	.48	15	.61
6	.44	16	.39
7	.49	17	.26
8	.70	18	.61
9	.47	19	.39
10	.56	20	.53

Note. $n = 516$

A confirmatory principal component factor analysis was performed with a varimax rotation. The Kaiser rule (1960) was followed which is not to consider factors with eigenvalues less than 1.00. Eigenvalues were found to drop below 1.00 at factor five (see Table 2). Simple structure was found at a four factor solution that accounted for 55.65 percent of the variance (Table 3). Cronbach alpha reliability coefficients were calculated for each factor. Reliability for factor one was found to be at .87, factor two at .83, factor three at .57, and factor four at .62. Upon examination of the factor loadings and common characteristics of each item, the factors were named. Items seven, eight, 12, 13, 14, 15, and 20 loaded on factor one; this factor was subsequently named "Advantages and Disadvantages of Inclusive Education." Items one, two, three, four, and 10 loaded on factor two; this factor was named "Professional Issues Regarding Inclusive Education." Items five, six, 11, and 16 loaded on factor three; the third factor was named "Philosophical Issues Regarding Inclusive Education." Items nine, 17, 18, and 19 loaded on factor four; this last factor was named "Logistical Concerns of Inclusive Education" (See Table 4).

Table 2

STATIC - Principal Components Factor Analysis with a Varimax Rotation

	Item	I	II	III	VI
1	7	67			
2	8	66			
3	12	55			
4	13	78			
5	14	71			
6	15	70			
7	20	73			
8	1		74		
9	2		74		
10	3		74		
11	4		75		
12	10		65		
13	5			61	
14	6			64	
15	11			60	
16	16			48	
17	9				47
18	17				74
19	18				45
20	19				64

Note. $n = 516$ Values are rounded two places and multiplied by 100

Table 3

STATIC - Principal Components Factor Analysis: A Four Factor Solution with Varimax Rotation

Factor	Sum of Squared Factor Loadings	Proportion of Variance
1	4.03	20.15
2	3.27	16.35
3	2.21	11.05
4	1.62	8.10
Total	11.13	55.65%

Note. $n = 516$ Includes 20 items

Table 4

Summary of STATIC Item Content by Factor Loading

Item	Item Content
	Factor 1: Advantages and Disadvantages
7	special education children should be in special education classes
8	special education children should be in regular education classes
12	special education children learn social skills from regular education children
13	special education children have higher academic achievements when included
14	special education children have higher self-esteem when included
15	special education children hinder academic progress of regular education classes
20	achievement is difficult for special education children when included
	Factor 2: Professional Issues
1	confidence in ability
2	confidence in training
3	frustration/tolerance when teaching special education children
4	anxiety toward teaching special education children
10	problems teaching children with cognitive deficits
	Factor 3: Philosophical Issues
5	all children can learn
6	special education children can learn
11	handling behavioral problems
16	training for teaching special education students
	Factor 4: Logistical Concerns
9	acomodating the physically disabled
17	principal supportive
18	making special physical arrangments
19	materials/equipment easily acquired

A one parameter Rasch model rating scale analysis was performed on the total sample as well as for special and regular education teachers individually. Item calibrations are reported in Tables 5, 6, and 7. Figures 1, 2, and 3 present a graphical description of the results of the one parameter Rasch model analysis. The vertical scale is presented in logits. These may be interpreted similarly to the numbers on the horizontal axis of the normal distribution. Negative logit values are easy items and lower person ability estimates. Positive items are more difficult items and higher person ability estimates. Person ability estimates and item difficulty estimates are represented on the vertical scale corresponding to the logit measure. Differences between the positioning of items and persons for all teachers, for special education teachers alone, and for regular education teachers alone are negligible. Item difficulties for the three

three groups ranged from -1.56 to 1.15. The near normal distribution of item logits and person abilities along the continuum indicated the items defined the theoretical construct of "attitude toward inclusion" relatively well. Table 8 presents a summary of the item content by difficulty level.

Table 5

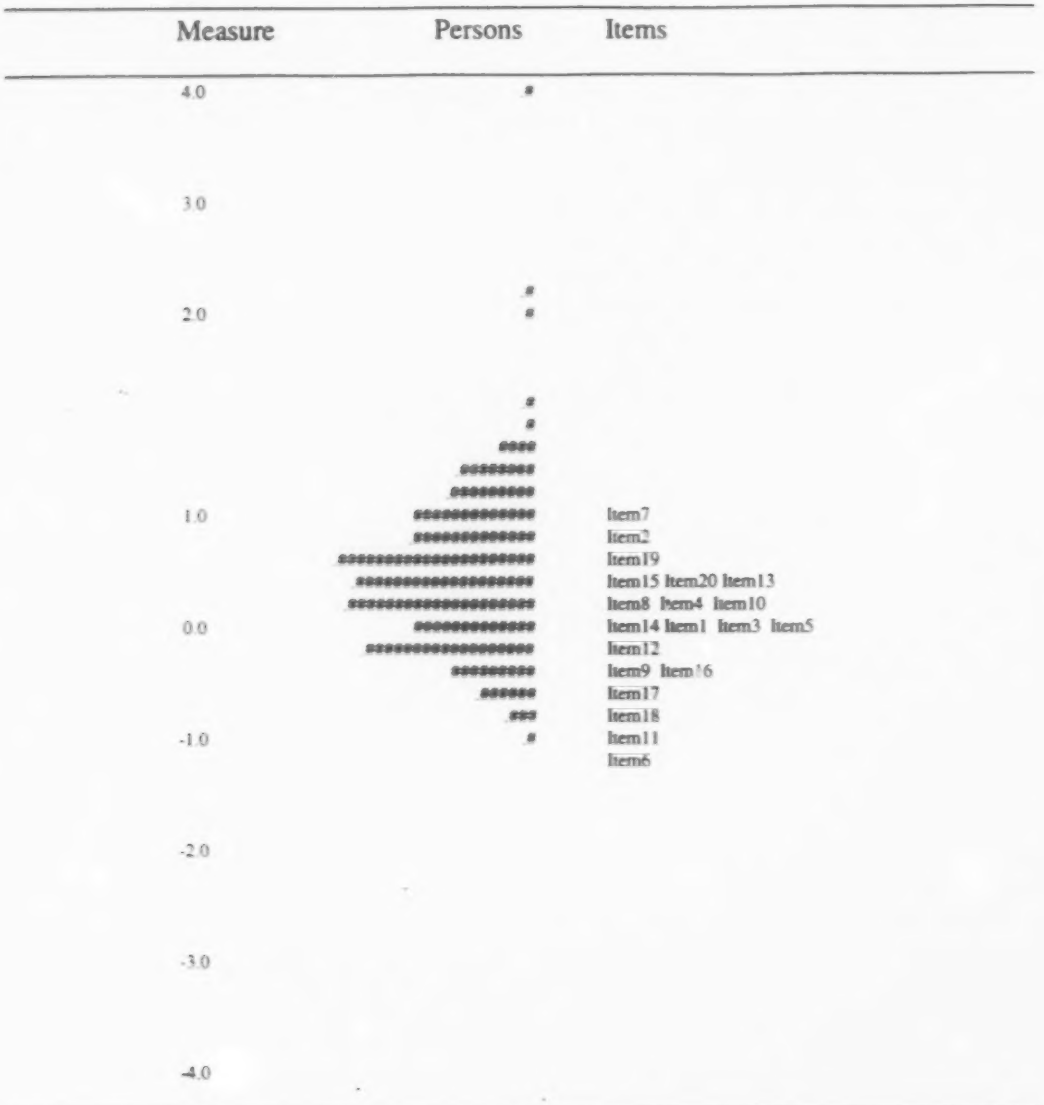
STATIC - Rasch Model Analysis for Continuous Data for All Teachers: Item Calibrations with Item Standard Error of Measurements

	Item	Item Calibration	Standard Error
1	7	1.00	.05
2	2	.91	.06
3	19	.79	.05
4	15	.60	.05
5	20	.55	.05
6	13	.51	.05
7	8	.31	.05
8	4	.21	.05
9	10	.21	.05
10	14	.18	.05
11	1	.08	.05
12	3	.00	.05
13	5	- .14	.06
14	12	- .37	.05
15	9	- .47	.06
16	16	- .49	.07
17	17	- .60	.06
18	18	- .92	.07
19	11	-1.05	.07
20	6	-1.31	.09

Note. $n = 494$

Figure 1

Rasch Model Analysis of the STATIC with All Teachers and Item Calibrations



Note. $n = 494$ Each '#' represents 3 persons; each '.' represents 1 to 2 persons

Table 6

STATIC - Rasch Model Analysis for Continuous Data for Special Education Teachers: Item Calibrations with Item Standard Error of Measurements

	Item	Item Calibration	Standard Error
1	7	1.05	.08
2	19	.80	.08
3	15	.66	.08
4	2	.60	.10
5	20	.58	.08
6	13	.57	.08
7	14	.27	.08
8	8	.22	.08
9	5	.10	.09
10	10	.05	.09
11	1	.01	.10
12	4	- .06	.10
13	3	- .08	.10
14	12	- .36	.10
15	16	- .41	.13
16	9	- .45	.10
17	17	- .60	.12
18	11	- .76	.13
19	18	- .92	.14
20	6	-1.27	.17

Note. $n = 186$

Figure 2

Rasch Model Analysis of the STATIC with Special Education Teachers and Item Calibrations

Measure	Persons	Items
3.0	XXXX	
	X	
	X	
	X	
2.3	XX	
	XX	
	XX	
	X	
	X	
1.5	XXXX	
	XXXXXXXXXXXX	
	XXXXXXXXXXX	
	XXXXXXX	Item7
	XXXXXXXXXXXXXXXXXX	
0.8	XXXXXXXXXXXX	Item19
	XXXXXXXXXXXXXXXXXX	Item15 Item2 Item20 Item13
	XXXXXXXXXXXXXXXXXXXX	
	XXXXXXXXXXX	Item14
	XXXXXXXXXXXX	Item8 Item5
0.0	XXXXX	Item10 Item1 Item4
	XXXXXXXXXXX	Item3
	XXXXXXXX	Item12
	XXX	Item16 Item9
	XXXXXX	Item17
-0.8		Item11
	XX	Item18
	X	
		Item6
-1.5		
-2.3		
-3.0		

Note. $n = 186$ Each 'X' represents 1 person

Table 7

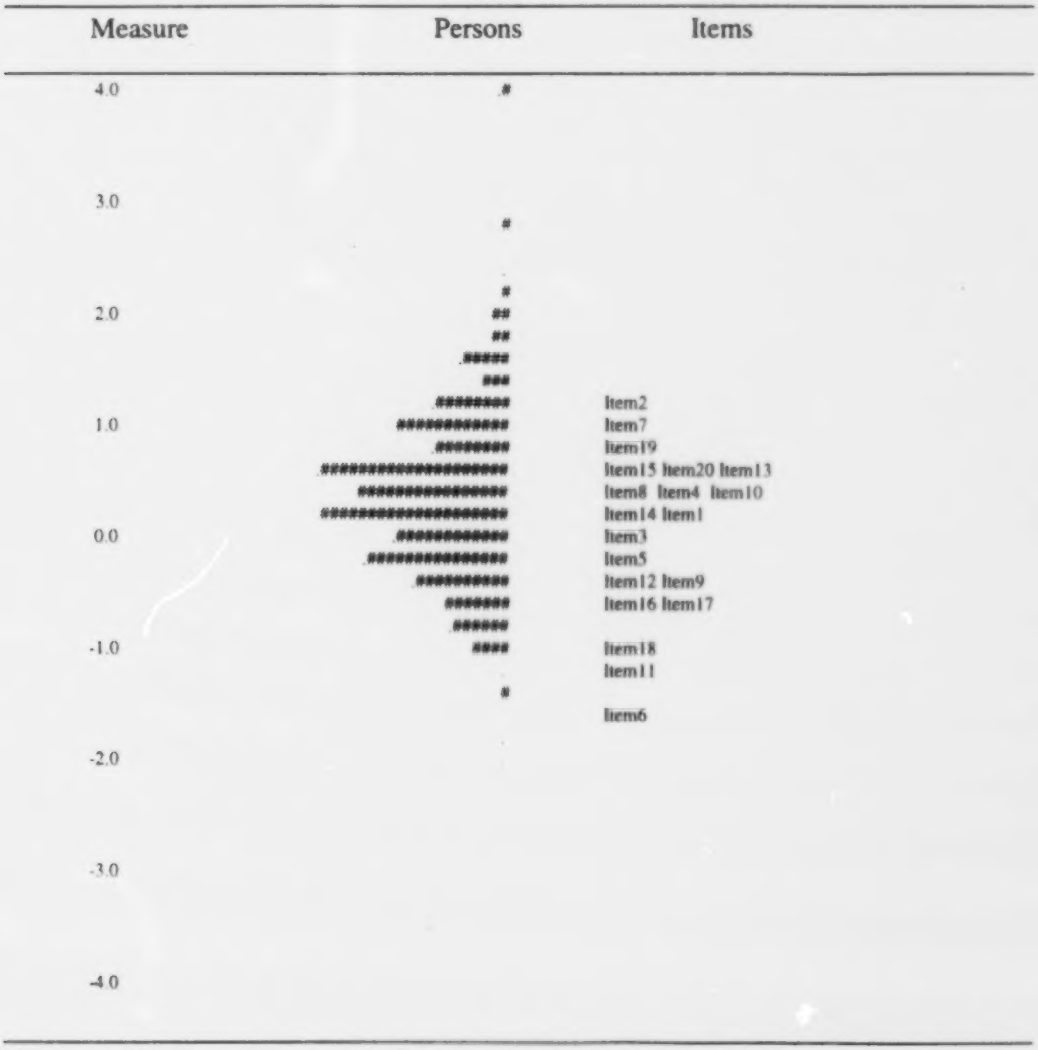
STATIC - Rasch Model Analysis for Continuous Data for Regular Education: Item Calibrations with Item Standard Error of Measurements

	Item	Item Calibration	Standard Error
1	2	1.15	.08
2	7	1.02	.07
3	19	.83	.07
4	15	.59	.07
5	20	.58	.07
6	13	.50	.06
7	8	.38	.06
8	4	.34	.06
9	10	.34	.06
10	14	.17	.06
11	1	.11	.06
12	3	.08	.06
13	5	- .28	.07
14	12	- .39	.07
15	9	- .49	.07
16	16	- .51	.09
17	17	- .62	.08
18	18	- .97	.09
19	11	-1.29	.10
20	6	-1.56	.12

Note. $n = 308$

Figure 3

Rasch Model Analysis of the STATIC with Regular Education Teachers and Item Calibrations



Note. n = 308 Each '#' represents 2 persons; each '.' represents 1 person

Although the items position similarly, they are not at exactly the same logit value. Differences in logit values of .25 or greater were found between regular and special education teachers on six items. Regular education teachers found items five, six, and 11 easier than special education teachers. These items addressed the teachers' beliefs about academic progress being possible for all children and their ability to handle mild to moderate behavioral problems. Special education teachers found items two, four, and 10 easier than regular education teachers. Not surprisingly, these items addressed teachers' perceived

training, and anxiety level when teaching students with special needs. The additional training of special education teachers is also reflected in the ability estimates. Ability estimates indicate a greater number of special education teachers in the high ability category than regular education teachers.

Discussion

Numerous studies have demonstrated that many teachers are hesitant and unwilling to make the necessary accommodations and changes required for students with special needs to be educated in regular education classrooms (Geskie & Salasek, 1988; Jones & Guskin, 1984). Such negative attitudes reflect attitudes historically taken by many toward disabled persons in general (Wyatt v. Stickney, 1972). Without radical changes, the limitations that will inherently be placed on students with special needs will inhibit successful implementation (Antonak, 1994). Thus, teachers' attitudes are critical, not only to successful inclusive education, but to the success of individuals with special needs (Barnett & Kabzems, 1992; Berryman, 1988; Darovill, 1989; Garvar Pinhas & Schmelkin, 1989; Hudson & Clunies Ross, 1984; Larrivee & Cooke, 1979).

As the trend to educate students with special needs in regular education classrooms continues, it is necessary to have psychometrically sound means of assessing teachers' attitudes toward inclusion (Antonak & Livneh, 1988). The purpose of this study was to fulfill this need by developing a psychometrically sound instrument to examine the extent that teachers' attitudes toward students with special needs could be measured. Since successful integration and acceptance of every student means that all teachers become teachers of special education students, the ultimate goal of the researcher was for this study to contribute to the extant body of knowledge and to future studies that may ultimately lead to interventions in preservice and inservice teachers education to bring about more positive attitudes toward students with special needs included in regular education classrooms.

Antonak and Livneh (1988) indicated that an instrument to measure teachers' attitudes toward inclusive education should be developed for experienced educators. Subjects for this study adequately meet this recommendation with more than half of the sample having greater than ten years experience. Findings from this study may be considered representative of teachers from the geographical area studied. A balance of urban, suburban, community, and rural schools were included in the study; this means that the study is generalizable to Alabama. Also, the number of special versus regular education teachers and elementary versus secondary education teachers was well proportioned.

Reliability of the STATIC is relatively high with Cronbach alpha coefficients at .89 for the total sample. Content validity of the STATIC is supported by the literature; during its construction, each variable included on the STATIC was identified by previous studies of a similar nature. Construct validity and internal consistency is indicated by the item-to-total correlation coefficients ranging from .26 to .70. Each of these properties were also demonstrated in two previous pilot studies. Additional data supporting the STATIC's construct validity may be found in the factor analysis.

An exploratory principal component factor analysis was conducted on the STATIC. Following Kaiser's rule (1960), eigenvalues of 1.00 or greater were retained and used in the factor solution. Four factors possessed eigenvalues of 1.00 or greater and were entered into a solution using the varimax rotation method. These four factors accounted for 55.65 percent of the total variance for the theoretical construct of "attitude toward inclusion." This is considered a reasonable amount of the variance representing a theoretical construct and strengthens the claim to construct validity. Upon examination of the factor loadings and common characteristics of the items, the factors were named: (a) Advantages and Disadvantages of Inclusive Education, (b) Professional Issues Regarding Inclusive Education, (c) Philosophical Issues Regarding Inclusive Education, and (d) Logistical Concerns of Inclusive Education. A thorough understanding of these underlying dimensions of attitudes toward inclusion may lead to strategies for positive change (Siller, 1984).

The one parameter Rasch model analysis revealed difficulty levels of the items on the STATIC ranged from -1.31 to 1.00. The Rasch scale is presented in logits and may be interpreted similarly to the numbers on the horizontal axis of the normal distribution. Negative logit values represent easy items and lower person ability estimates. Positive items represent more difficult items and higher person ability estimates. Distribution of item logits along this continuum indicated additional evidence that the STATIC defined a single theoretical construct. Examination of the total sample and individual groups of special and regular education teachers separately revealed that the same six items were considered easiest and most difficult by regular and special education groups. The fact that the items rank order similarly for both groups provide evidence that these items are perceived alike for regular and special education teachers.

Several interesting ideas emerge from examination of the Rasch analysis data. Of particular interest to this study is the item considered most difficult to answer by all groups: "I believe that children with special needs should be placed in special education classes." This item represents the nucleus of this study and the essence of the instrument as a whole. Educating special education children in regular education classrooms is a difficult issue with many underlying variables for teachers to consider.

Another interesting observation revealed by the Rasch model analysis is that teachers easily answered the item regarding confidence in their ability to teach children with special needs. This is contrary to the findings of Horne, (1983); Hudson, Graham, & Warner, (1979); and Nader, (1984) who reported that most regular education teachers do not feel competent in teaching students with disabilities. From this observation, it might appear that teacher education programs are doing a better job in training teachers now than in previous years. However, teachers find it difficult to answer that they are confident that they have been adequately trained to teach children with special needs. It would appear that teachers are confident in their ability but not their training. This is supported by the findings of Conte (1994). Some have asserted that regular educators are not willing, able, nor equipped to accomodate students with disabilities (Fuchs & Fuchs, 1991; Kauffman, Gerber, & Semmel, 1988; Lieberman, 1992; Semmel, Abernathy, Butera, & Lesar, 1991; Verguson & Anderegg, 1993; Walker & Bullis, 1991). However, these findings may indicate the possibility that it is the uncertainty of the quality of their training that may be the source of their reservations. For years teachers have been encouraged to refer hard-to-manage students and students with severe intellectual and emotional problems to specialists (Pugach, 1988; Sindelar, Pugach, Griffin, & Seidl, 1994). Now, they must be equipped to handle these students themselves.

Conclusion

Data indicate that it is possible to measure teachers' attitudes toward inclusion as defined by the STATIC. This study provides sufficient evidence to warrant the use of this instrument for the purpose of measuring teachers' attitudes. Further investigation is warranted in: (a) broader sampling to insure a more accurate reflection of state and/or national norms, (b) additional validity studies with other quality instruments measuring similar constructs, (c) additional item response to explore why certain items on the STATIC were found difficult for teachers to answer, (d) additional item construction to yield item calibrations indicative of easier and more difficult items, (e) alternate forms of the STATIC that are more specific with regard to various disabilities or items that require three responses for mild, moderate, and severe disabilities to yield more valuable data, (f) the development of self-rating scales of perceived ability to teach in an inclusive environment to isolate specific areas of professional development needed by teachers, (g) adaptations in teacher education programs to strengthen areas considered most difficult by teachers regarding inclusive education, (h) the STATIC being piloted for use as a diagnostic instrument with inservice teachers to identify needs for additional training, (i) the STATIC being piloted for use as a screening instrument for prospective teachers in school systems practicing inclusive education, (j) the STATIC being piloted for use as a diagnostic instrument with preservice and inservice teachers to identify areas of teacher education programs that need evaluation or revision, (k) the STATIC being used as the basis to develop an instrument to measure regular and special education students' attitudes toward

inclusion, (l) studies using the STATIC with student performance measures to investigate relationships between regular education teachers' attitudes toward inclusion and the performance of students with special needs included in their classrooms, (m) the STATIC being used to control for teachers' attitudes in future inclusion studies, (n) a subscale analysis of the STATIC being conducted to establish the usefulness of each subscale for diagnostic purposes, and (o) collecting IRT studies to compare teachers' level of education and years experience for potential relationships.

Until now, there have been few district-wide studies on inclusion (Neary, Halvorsen, Kronberg, & Kelly, 1992; Salisbury, Palombaro, & Hollowood, 1993; York & Tudidor, 1995). This study moves toward a large scale analysis by including five districts. Based on the findings of this study, there is adequate evidence to positively support the validity studies presented herein and to pursue the use of the STATIC to: (a) examine the effects of teachers' attitudes on the performance of special education students, (b) guide in the placement decisions for special education students by placing them in a more positive and supportive environment in which to learn, (c) screen prospective teachers prior to employment for attitudes that reflect the educational philosophy and mission of the district, (d) shape teacher education programs and curriculum to better prepare teachers for inclusive educational environments, and (e) diagnostically focus remediation on specific dimensions of attitude requiring modification. Areas requiring modification may be identified from STATIC subscale scores or the difficulty level identified by the IRT studies presented in Figures 1, 2, and 3.

Since many school districts have adopted a full inclusion model with many more considering the implementation of the practice, these issues warrant attention. When considering inclusion, frequently the focus is on the child or children to be included. Seldom is the teacher's attitude examined (Hannah, 1988). As noted earlier, attitudes effect students and are significant contributors to the successful integration of students with disabilities (Barnartt & Kabzems, 1992; Berryman, 1988; Biklen, 1985; Darovill, 1989; Garvar-Pinhas & Schmelkin, 1989; Hudson & Clunies-Ross, 1984; Larrivee & Cook, 1979; Nader, 1984; Winzer, 1985). Jones (1984) called for the elimination of, not only physical barriers, but of attitudinal barriers as well. When inclusion is implemented, attitudes must change (Wolery, Werts, Caldwell, Snyder, & Lisowski, 1995). Not only must teachers be prepared cognitively, but also in the affective domain to effectively deal with the unique problems they will face.

This study reveals that there are significant differences in teachers' attitudes toward educating children with special needs in regular education classrooms. Hopefully, this will move educators toward a better understanding of teachers' attitudes toward inclusion and lead to specific interventions and strategies resulting in more positive attitudes toward educating these children.

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